Statement of Work
HVAC System Renovation and Up-grade Project
Pico Del Este (QJQ) LRR
Puerto Rico

General:
This document covers the requirements of the Federal Aviation Administration (FAA) for renovation of the air conditioning system that services the space and equipment for Pico Del Este (QJQ) Long Range Radar (LRR), Puerto Rico.

Contractor Qualifications:
The contractor shall possess in-house capabilities required to provide the FAA with a seamless replacement of air cooled condensing units (with the addition of a foundation for a new 4th unit) and Indoor Air Handling Units. Work shall include minimal ductwork, diffusers, electrical power and controls.

Background:
The existing HVAC system consists of two units for the first floor equipment room and single unit for the second floor. While the outdoor units have been replaced over the years, the indoor air handling units are 20+ years old and in poor conditions. In terms of cooling capacity the first floor units (15 tons and 10 tons) are slightly undersized for today's cooling loads with poor air distribution. The second floor unit (7.5 tons) is well matched for the cooling load but has no back-up cooling. Currently the equipment on both floors are being cooled to minimum standards but the air quality (humidity) is less that ideal.

Location Of Project:
El Yunque National Rainforest
Puerto Rico
18°16'08.98"N, 65°45'32.59"W
Google Earth

Project Description:
The work shall include, but not be limited to, furnishing all labor, materials, equipment, and services as may be necessary to:

- Furnish and install epoxy coated galvanized steel supports. Steel shall extend between the existing concrete condensing unit pads and serve as the foundation for the additional condensing unit (CU-4).

- Correct electrical conduit connection on CU-3.

- Power wash CU-3,1.

- Selectively remove CU-2 (10 ton cooling capacity). Electrical disconnect to be reused. Conduit and conductors from disconnect to unit shall be replaced.

- Selectively remove AHU-2 (10 ton cooling capacity). Outside air duct wall penetration shall be sealed air tight with 22 U.S. gauge galvanized sheet metal and expanding foam insulation. Existing smoke detector shall be selectively removed from the unit and be re-installed into the new unit. Electrical disconnect to be reused. Conduit and conductors from disconnect to unit shall be replaced.

- Furnish and install new AHU-2 and CU-2 for the first floor (15 ton cooling capacity). AHU-2 shall have electric reheat coil for humidity control (10 kw). Electrical disconnects shall be reused. Conduit and conductors from disconnect to units shall be replaced. Conduit for CU-2 shall be waterproof. All electrical work shall comply with NEC.

- Furnish and install new AHU-4 and CU-4 (7.5 ton cooling capacity), a new back-up unit for the second floor. AHU-4 shall have electric reheat coil for humidity control (5 kw). Electrical service shall be established from an existing HVAC power panel for the new units including new disconnects. Conduit and disconnect for CU-4 shall be waterproof. All electrical work shall comply with NEC.

- Selectively remove AHU-1 (15 ton cooling capacity). Outside air duct wall penetration shall be sealed air tight with 22 U.S. gauge galvanized sheet metal and expanding foam insulation. Electrical disconnect to be reused. Conduit and conductors from disconnect to unit shall be replaced.

- Furnish and install new AHU-1 (15 ton cooling capacity). AHU-1 shall have electric reheat coil for humidity control (10kw). Electrical disconnect shall be reused. Conduit and conductors from disconnect to unit shall be replaced. All electrical work shall comply with NEC.

- Selectively remove AHU-3 (7.5 ton cooling capacity), servicing the second floor. Outside air duct wall penetration shall be sealed air tight with 22 U.S. gauge galvanized sheet metal and expanding foam insulation. Electrical disconnect to be reused. Conduit and conductors from disconnect to unit shall be replaced.

- Furnish and install new AHU-3 (7.5 ton cooling capacity), servicing the second floor. AHU-3 shall have electric reheat coil for humidity control (5kw). Electrical disconnects shall be reused. Conduit and conductors from disconnect to units shall be replaced. Conduit for CU-2 shall be waterproof. All electrical work shall comply with NEC.

- Furnish and install electrical flexible conduit, conductors and miscellaneous electrical parts for electrical service as per the manufacturers installation requirements. All electrical work shall comply with the latest NEC code.

- Furnish and install approved Transient Voltage Surge Suppression (TVSS) for the electrical service to all condensing units, Air Handling Units, and associated controls.

- Furnish and install electrical grounding and bonding for the units to the existing lightning protection system.

- Furnish and install hurricane restraints for all condensing units in accordance with current building codes.

- Units (AHU-1,2,3,and 4) shall control the indoor air quality to a temperature of 72°F (+/- 2°F) and a relative humidity of 50% (+/- 5%). Contractor shall provide controls that will operate unit and reheat coils achieve this goal. Contractor shall provide a control point function schedule, a sequence-of operation narrative and drawing for review and approval.

SUBMITTALS:

The Contractor shall submit the following product information and documents:

- Gantt Chart Construction schedule for this project.

- Shop drawings for steel support for CU-4.

- Shop drawing for hurricane anchoring of units with approve from the Building Code Official of Jurisdiction.

- Ductwork shop drawings including diffusers and grills.

- Material Safety Data Sheets for all product that will be used on site

- Manufacturer's equipment submittals for CU-2, CU-4, AHU-1, AHU-2, AHU-3 and AHU-4. Including but not limited to, Cooling capacity, Re-heat capacity for dehumidification, electrical power requirements and controls.

- Manufacturer's installation literature for CU-2, CU-4, AHU-1, AHU-2, AHU-3 and AHU-4.

- Manufacture's control sensors (Temperature and Humidity), unit controllers and sequence-of-operation.

- Manufacturer's cut sheets for the Transient Voltage Surge Suppression (TVSS) devices and installation requirements.

- Materials for grounding and bonding the units.

- Materials for electrical service.

The above submittals will be reviewed by the Government and be approved, disapproved or approved as noted. The Contractor shall not proceed with procurement of material and equipment until the Government approves the submittals.

WARRANTIES:

The contractor shall provide a five (5) year Manufacturer warranty on parts and labor for the compressors.

The contractor shall provide a one (1) year Manufacturer warranty on parts and labor for all other unit parts.

The Contractor shall provide a one (1) year parts and labor warranty on installation.

The warranties shall be unconditional. Any required warranty repairs shall be mobilized and on-site within a maximum of 24 hours after notification by the Government of an equipment service problem.

The Contractor shall furnish to the FAA Resident Engineer (RE) or Technical Contact the certificate of this warranty stating the beginning and ending dates of the period of coverage. Also, guarantee that each piece of apparatus shall have a capacity or performance of not less than that specified or required when the apparatus is operating under specified design conditions.

SAFETY:

All fall protection and safety equipment and installation shall be coordinated with the FAA Resident Engineer and in compliance with latest OSHA standards. A fall protection plan shall be submitted to the SSC Contact and the Technical Contact before starting work.

DEMOLITION:

Any equipment obstructing the Contractor's access to the work area shall either be temporarily relocated by the Contractor to a storage area designated by the RE or Technical Contact or be covered in a manner as to provide suitable access while protecting the Government property from construction damage. At the completion of all work, the Contractor shall return all such items to their original location.

Any unused conduit, wire, equipment, structural supports or other fittings associated with equipment or devices to be removed under this contract shall be disposed of by the contractor.

Any equipment or material to be removed, unless specified to remain the property of the FAA, shall become the property of the Contractor and shall be transported from the site and disposed of in a legal manner.

SCHEDULE OF WORK:

All work shall be performed during normal daytime hours of 7:30 AM to 4:00 PM unless otherwise approved by the RE or Technical Contact.

WORKING CONDITIONS:
All work will have to be accomplished in an active long range radar facility. The contractor shall make every effort to avoid disturbing any radar or support equipment. Any activity that will require shutting down any support equipment must be scheduled in advance and a risk management assessment shall be performed.

AVAILABILITY OF UTILITIES:
Water, electricity and toilet facilities will be available on the site. Public telephone service will not be available for the Contractor's use on the site.

Sketches
See attachment.

Known Acceptable Sources (Equipment Selection)
See attachment. Equipment shown is for design use only. The contractor may submit equipment from another well established manufacturer with a minimum business history of 20 year as a HVAC manufacturer for consideration.

Funding String:
See attached Project Authorization

Funding Amount:
See attachments

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Organization Routing Symbol Of Requestor:
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